

Joel Brecount  
ThermaTru Corporation  
108 Mulzfeld Road  
Butler, IN 46721

Re: **033-10998**  
Significant Source Modification to:  
Part 70 permit No.: **T 033-7972-00019**

Dear Mr. Brecount:

ThermaTru Corporation was issued Part 70 operating permit **T 033-7972-00019** on November 12, 1998 for stationary metal doors, sash and trim plastics products manufacturing plant. An application to modify the source was received on May 24, 1999. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

**Door Assembly Line, capacity: 20,250 pounds of doors per hour or 450 doors per hour**

- (a) One (1) electric door skin preheat oven, known as D2-OV1, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.1, capacity: 20,250 pounds per hour of fiberglass door skins per hour or 450 doors per hour.
- (b) One (1) adhesive application station, known as D2-APP1, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.2, capacity, 43 pounds of adhesive per hour or 450 doors per hour.
- (c) One (1) electric glue curing oven, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.2, known as D2-OV2, capacity: 450 doors per hour.
- (d) One (1) electric skin reheat oven, known as D2-OV3, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.3, capacity: 450 doors per hour.
- (e) One (1) door foam injection system, known as D2-F1, exhausting through Stack 19.1, capacity: 2,300 pounds of resin and foam insulation per hour or 450 doors per hour.
- (f) One (1) door machining station, known as D2-MS1, equipped with a baghouse and cyclone connected in series, known as D2-DC1, exhausting through Stack 20.1, capacity: 450 doors per hour or 20,250 pounds per hour.

**New Skins Warehouse**

Molding Plant Sheet Molding Compound Production Line, known as SMC2, capacity: 18,500 pounds of molding compound per hour, consisting of:

- (g) One (1) existing permitted calcium carbonate silo to be relocated, equipped with a baghouse, known as SILO1, exhausting through Stacks 25.1, capacity: 150,000 pounds calcium carbonate.

- (h) Two (2) calcium carbonate silos, known as SILO2 and SILO3, each equipped with a baghouse, exhausting through Stacks 25.2 and 25.3, throughput: 2,960 pounds of calcium carbonate per hour each, capacity: 150,000 pounds calcium carbonate, each.
- (i) One (1) resin mixer, exhausting through Stack 17.1 and/or Stack 17.2, throughput: 8,880 pounds of calcium carbonate, 4,700 pounds of resin, 648 pounds of pigment mixture, 130 pounds of release agent, and 74 pounds of catalyst per hour.
- (j) One (1) sheet molding compound extruder, exhausting through Stack 17.1 and/or Stack 17.2, throughput 14,432 pounds of materials plus 4,070 pounds of chopped fiberglass strands per hour.
- (k) One (1) sheet molding compound press, throughput 18,500 pounds of sheet molding compound per hour.
- (l) One (1) hose cleaning re-circulation station, (cold cleaner tank, known as SMC-CC2), exhausting through Stack 17.1 and/or Stack 17.2, capacity: 0.957 pounds of methylene chloride per hour (based on 20 hours per day at 1.75 gallons per day).

and the following insignificant activities:

#### **New Skins Warehouse**

- (m) Two (2) above ground resin storage tanks to be relocated or removed from service, known as B-1 and B-2, capacity: 8,000 gallons, each.
- (n) Six (6) above ground resin storage tanks, known as B3-B8 or MTANK-3 through MTANK-8, exhausting through Stack 17.1 and/or Stack 17.2, capacity: 10,000 gallons each, throughput 4,700 pounds of resin per hour.
- (o) Six (6) space heaters, known as M-MAU-1 and M-MAU-2, rated at 8.80 million British thermal units per hour, each, and M-MAU-3 through M-MAU-6, rated at 0.550 million British thermal units per hour, each.
- (p) Four (4) exhaust fans.

#### **New Door Warehouse**

- (q) Seven (7) space heaters, known as D-MAU-1 through D-MAU-3, rated at 8.80 million British thermal units per hour, each, and D-MAU-4 through D-MAU-7, rated at 0.550 million British thermal units per hour, each.
- (r) Four (4) exhaust fans.

In addition, the existing EU6.1 will be phased out after both degreasing units are in operation for approximately two (2) months. Degreasing operations, identified as EU6, consisting of one (1) Safety Kleen cold cleaner will be unaffected, exhausting to stacks 6.10 and 6.13 and the one (1) methylene chloride cold cleaner which exhausts to stacks 12.4, and 13.4 will be phased out.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The proposed operating conditions applicable to these emission units are attached to this Source Modification approval. These proposed operating conditions shall be incorporated into the Part 70 operating permit as a significant source modification in accordance with 326 IAC 2-7-10.5(l)(1) and 326 IAC 2-7-11.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter contact Mark L. Kramer, c/o OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Management

Attachments  
MLK/MES

cc: File - Dekalb County  
U.S. EPA, Region V  
Dekalb County Health Department  
Air Compliance Section Inspector - Doyle Houser  
Compliance Data Section - Karen Nowak  
Administrative and Development - Janet Mobley  
Technical Support and Modeling - Michele Boner

**PART 70 OPERATING PERMIT  
and ENHANCED NEW SOURCE REVIEW  
OFFICE OF AIR MANAGEMENT**

**ThermaTru Corporation  
108 Mutzfeld Road  
Butler, Indiana 46721**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T 033-7927-00019	
Issued by: Felicia R. George, Assistant Commissioner Office of Air Management	Issuance Date: November 12, 1999
First Significant Source Modification: SSM 033-10998-00019	Pages Affected: 5, 5a, 6 Sections added D.4 and D.5 on pages 39a-m & 43a&b
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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**Emergency/Deviation Occurrence Report**

**Quarterly Reports**

**Quarterly Compliance Monitoring Report**



## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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The Permittee owns and operates a stationary metal doors, sash and trim plastics products manufacturing plant

Responsible Official: Brett Mueller  
Source Address: 108 Mutzfeld Road, Butler, IN 46721  
Mailing Address: 108 Mutzfeld Road, Butler, IN 46721  
SIC Code: 3442 and 3089  
County Location: Dekalb  
County Status: Attainment for all criteria pollutants  
Source Status: Part 70 Permit Program  
Minor Source, under PSD Rules;  
Major Source, Section 112 of the Clean Air Act

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

- (1) Fiberglass operations, identified as EU1, consisting of one (1) resin mixer, one (1) fiberglass extruder (SMC) and six (6) fiberglass presses, with a maximum capacity of 17,280 pounds of resin per hour, and exhausting to stacks 13.1, 13.2 13.3 and 13.4
- (2) One door skin gluing operation, identified as EU2, with a maximum capacity of 360 doors per hour, and exhausting to stacks 1.1 and 1.2.
- (3) One (1) flowcoating operation, identified as EU3, consisting of one (1) flowcoater, one (1) flash off tunnel and one (1) paint cure oven, with a maximum capacity of 360 doors per hour, and exhausting to stacks 3.1and 3.2, 4.1and 4.2, and 4.3 and 4.4 respectively.
- (4) One (1) machining station, identified as EU4, with a maximum capacity of 360 doors per hour, using a dust collector for particulate emission control, and exhausting to stack 5.1.
- (5) One (1) calcium carbonate storage silo, identified as EU5, with a maximum throughput of 16,500 pounds per day, and using a baghouse for particulate control.
- (6) Degreasing operations, identified as EU6, consisting of one (1) Safety Kleen cold cleaner and one (1) methylene chloride cold cleaner, exhausting to stacks 13.1, 13.2, 13.3 and 13.4.

**Door Assembly Line, capacity: 20,250 pounds of doors per hour or 450 doors per hour**

- (7) One (1) electric door skin preheat oven, known as D2-OV1, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.1, capacity: 20,250 pounds per hour of fiberglass door skins per hour or 450 doors per hour.
- (8) One (1) adhesive application station, known as D2-APP1, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.2, capacity, 43 pounds of adhesive per hour or 450 doors per hour.
- (9) One (1) electric glue curing oven, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.2, known as D2-OV2, capacity: 450 doors per hour.
- (10) One (1) electric skin reheat oven, known as D2-OV3, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.3, capacity: 450 doors per hour.
- (11) One (1) door foam injection system, known as D2-F1, exhausting through Stack 19.1, capacity: 2,300 pounds of resin and foam insulation per hour or 450 doors per hour.
- (12) One (1) door machining station, known as D2-MS1, equipped with a baghouse and cyclone connected in series, known as D2-DC1, exhausting through Stack 20.1, capacity: 450 doors per hour or 20,250 pounds per hour.

#### **New Skins Warehouse**

Molding Plant Sheet Molding Compound Production Line, known as SMC2, capacity: 18,500 pounds of molding compound per hour, consisting of:

- (13) One (1) existing permitted calcium carbonate silo to be relocated, equipped with a baghouse, known as SILO1, exhausting through Stacks 25.1, capacity: 150,000 pounds calcium carbonate.
- (14) Two (2) calcium carbonate silos, known as SILO2 and SILO3, each equipped with a baghouse, exhausting through Stacks 25.2 and 25.3, throughput: 2,960 pounds of calcium carbonate per hour each, capacity: 150,000 pounds calcium carbonate, each.
- (15) One (1) resin mixer, exhausting through Stack 17.1 and/or Stack 17.2, throughput: 8,880 pounds of calcium carbonate, 4,700 pounds of resin, 648 pounds of pigment mixture, 130 pounds of release agent, and 74 pounds of catalyst per hour.
- (16) One (1) sheet molding compound extruder, exhausting through Stack 17.1 and/or Stack 17.2, throughput 14,432 pounds of materials plus 4,070 pounds of chopped fiberglass strands per hour.
- (17) One (1) sheet molding compound press, throughput 18,500 pounds of sheet molding compound per hour.
- (18) One (1) hose cleaning re-circulation station, (cold cleaner tank, known as SMC-CC2), exhausting through Stack 17.1 and/or Stack 17.2, capacity: 0.957 pounds of methylene chloride per hour (based on 20 hours per day at 1.75 gallons per day).

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]  
[326 IAC 2-7-5(15)]

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This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
- (2) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (3) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (4) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (5) Water based adhesives that are less than or equal to 5% by volume of VOC's excluding HAPs.
- (6) Paved and unpaved roads and parking lots with public access.
- (7) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic feet and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking.
- (8) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kiloPascals measured at 38 degrees C).
- (9) A laboratory as defined in 326 IAC 2-7-1(21)(C).
- (10) One foam press with VOC emissions less than 3 lb/hr and 15 lbs/day.
- (11) Two five thousand (5,000) gallon tanks storing urethane system resin component with VOC emissions less than 3 lb/hr and 15 lbs/day.
- (12) Two five thousand (5,000) gallon tanks storing polymethylene polyphenylisocyanate (poly) with VOC emissions less than 3 lb/hr and 15 lbs/day.
- (13) Six (6) above ground resin storage tanks, known as B3-B8 or MTANK-3 through MTANK-8, exhausting through Stack 17.1 and/or Stack 17.2, capacity: 10,000 gallons each, throughput 4,700 pounds of resin per hour with VOC emissions less than 3 lbs/hr and 15 lbs/day.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

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This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) it is a major source, as defined in 326 IAC 2-7-1(22); and
- (b) it is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## SECTION D.4

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

#### **Door Assembly Line, capacity: 20,250 pounds of doors per hour or 450 doors per hour, consisting of:**

- (7) One (1) electric door skin preheat oven, known as D2-OV1, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.1, capacity: 20,250 pounds per hour of fiberglass door skins per hour or 450 doors per hour.
- (8) One (1) adhesive application station, known as D2-APP1, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.2, capacity, 43 pounds of adhesive per hour or 450 doors per hour.
- (9) One (1) electric glue curing oven, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.2, known as D2-OV2, capacity: 450 doors per hour.
- (10) One (1) electric skin reheat oven, known as D2-OV3, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.3, capacity: 450 doors per hour.
- (11) One (1) door foam injection system, known as D2-F1, exhausting through Stack 19.1, capacity: 2,300 pounds of resin and foam insulation per hour or 450 doors per hour.
- (12) One (1) door machining station, known as D2-MS1, equipped with a baghouse and cyclone connected in series, known as D2-DC1, exhausting through Stack 20.1, capacity: 450 doors per hour or 20,250 pounds per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### **Emission Limitations and Standards [326 IAC 2-7-5(1)]**

#### **D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]**

Any change or modification which may increase the potential emissions of VOC to twenty-five (25) tons per year from the door assembly line adhesive application station must be approved by the Office of Air Management before such change may occur.

#### **D.4.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]**

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating), the volatile organic compound (VOC) content of coating delivered to the applicator at the door assembly line adhesive application station shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.
- (b) Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

**D.4.3 Particulate Matter (PM) [326 IAC 6-3-2(c)]**

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- (a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the door assembly line adhesive application station shall not exceed 19.3 pounds per hour when operating at a process weight rate of 10.1 tons per hour.
- (b) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the door machining station, known as D2-MS1, equipped with a baghouse and cyclone connected in series, known as D2-DC1, shall not exceed 19.3 pounds per hour when operating at a process weight rate of 10.1 tons per hour.
- (c) The pounds per hour limitations were calculated with the following equation:  
  
Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

**D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the door assembly line adhesive application station and the door machining station and any control devices.

**Compliance Determination Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)]**

**D.4.5 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]**

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- (a) Within 180 days after start-up of the door machining station, known as D2-MS1, the Permittee shall perform PM testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.
- (b) The Permittee is not required to test the adhesive application station by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the adhesive application station is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.4.3(a) shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

**D.4.6 Volatile Organic Compounds (VOC)**

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Compliance with the VOC content contained in Conditions D.4.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

**D.4.7 Particulate Matter (PM)**

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The baghouse and cyclone in series for PM control shall be in operation and control emissions from the door machining station at all times that the door machining is in operation.

## **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

### **D.4.8 Monitoring**

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- (a) Monthly inspections shall be performed of the adhesive application station coating emissions from the stacks and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

### **D.4.9 Visible Emissions Notations**

---

- (a) Visible emission notations of the door machining station stack 20.1 exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

### **D.4.10 Parametric Monitoring**

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The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the door machining station, at least once daily when the machining station is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 4.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

#### D.4.11 Baghouse Inspections

---

An inspection shall be performed each calendar quarter of all bags controlling the door machining station operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

#### D.4.12 Broken or Failed Bag Detection

---

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### D.4.13 Cyclone Inspections

---

An inspection shall be performed each calendar quarter of all cyclones controlling the door machining operation when venting to the atmosphere. A cyclone inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.

#### D.4.14 Cyclone Failure Detection

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In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.4.15 Record Keeping Requirements

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- (a) To document compliance with Condition D.4.8, the Permittee shall maintain a log of monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (b) To document compliance with Condition D.4.9, the Permittee shall maintain records of daily visible emission notations of the door machining station stack exhaust.
- (c) To document compliance with Condition D.4.10, the Permittee shall maintain the following:



- (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
  - (A) Inlet and outlet differential static pressure; and
  - (B) Cleaning cycle: frequency and differential pressure.
- (2) Documentation of all response steps implemented, per event .
- (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
- (4) Quality Assurance/Quality Control (QA/QC) procedures.
- (5) Operator standard operating procedures (SOP).
- (6) Manufacturer's specifications or its equivalent.
- (7) Equipment "troubleshooting" contingency plan.
- (8) Documentation of the dates vents are redirected.
- (d) To document compliance with Conditions D.4.11 and D.4.13, the Permittee shall maintain records of the results of the inspections required under Conditions D.4.11 and D.4.13 and the dates the vents are redirected.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.5

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

Molding Plant Sheet Molding Compound Production Line, known as SMC2, capacity: 18,500 pounds of molding compound per hour, consisting of:

- (13) One (1) existing permitted calcium carbonate silo to be relocated, equipped with a baghouse, known as SILO1, exhausting through Stacks 25.1, capacity: 150,000 pounds calcium carbonate.
- (14) Two (2) calcium carbonate silos, known as SILO2 and SILO3, each equipped with a baghouse, exhausting through Stacks 25.2 and 25.3, throughput: 2,960 pounds of calcium carbonate per hour each, capacity: 150,000 pounds calcium carbonate, each.
- (15) One (1) resin mixer, exhausting through Stack 17.1 and/or Stack 17.2, throughput: 8,880 pounds of calcium carbonate, 4,700 pounds of resin, 648 pounds of pigment mixture, 130 pounds of release agent, and 74 pounds of catalyst per hour.
- (16) One (1) sheet molding compound extruder, exhausting through Stack 17.1 and/or Stack 17.2, throughput 14,432 pounds of materials plus 4,070 pounds of chopped fiberglass strands per hour.
- (17) One (1) sheet molding compound press, throughput 18,500 pounds of sheet molding compound per hour.
- (18) One (1) hose cleaning re-circulation station, (cold cleaner tank, known as SMC-CC2), exhausting through Stack 17.1 and/or Stack 17.2, capacity: 0.957 pounds of methylene chloride per hour (based on 20 hours per day at 1.75 gallons per day).

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.5.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

The total potential to emit VOCs from the sheet molding compound production line shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period. The total potential to emit VOCs shall be calculated by multiplying the total mass of volatile organic compounds (VOC) in resins applied to the applicators times a flashoff factor of three percent (3%) from AP-42 or a lower emission factor substantiated by a performance test. In addition, any VOCs delivered to the applicators from the use of clean-up solvents and other materials shall be included in the total potential to emit VOCs from the sheet molding compound production line. Therefore, this VOC emission limit will render 326 IAC 8-1-6 not applicable to the sheet molding compound production line.

#### D.5.2 HAPs [326 IAC 2-1-3.4]

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The total potential to emit a single and combination of HAPs from the sheet molding compound production line shall be limited to less than ten (10) and twenty-five (25) tons per twelve (12) consecutive month period, respectively. The total potential to emit HAPs shall be calculated by multiplying the total mass of HAPs in resins applied to the applicators times a flashoff factor of three percent (3%) from AP-42 or a lower emission factor substantiated by a performance test. In addition, any HAPs delivered to the applicators from the use of clean-up solvents and other materials shall be included in the total potential to emit HAPs from the sheet molding compound production line. Therefore, these HAPs limits will render 326 IAC 2-1-3.4 not applicable to the sheet molding compound production line.

#### D.5.3 Volatile Organic Compounds (VOC)

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- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

- (B) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

#### D.5.4 Particulate Matter (PM) [326 IAC 6-3]

- (a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the sheet molding compound production line shall not exceed 18.2 pounds per hour when operating at a process weight rate of 9.25 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the calcium carbonate silos, known as SILO2 and SILO3, shall not exceed 5.33 pounds per hour each when operating at a process weight rate of 1.48 tons per hour each.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

#### D.5.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the sheet molding compound production line, including the hose cleaning re-circulation station, (cold cleaner tank, known as SMC-CC2).

### **Compliance Determination Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)]**

#### **D.5.6 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-1.1-11]**

The Permittee is not required to test these facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facilities are in compliance. If testing is required by IDEM, compliance with the PM limits specified in Condition D.5.4 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

#### **D.5.7 Halogenated Solvent Cleaning Machine NESHAP [326 IAC 20-6][40 CFR Part 63, Subpart T]**

The hose cleaning re-circulation station, (cold cleaner tank, known as SMC-CC2) is subject to 40 CFR Part 63, Subpart T, (Halogenated Solvent Cleaning Machine NESHAP) that was promulgated on December 2, 1994.

The following design requirements for the degreasing operation are applicable:

- (a) Each owner or operator of an immersion batch cold solvent cleaning machine shall comply with the requirement of one of the following:
  - (1) Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal, and a water layer at a minimum thickness of 2.5 centimeters (1.0 inch) on the surface of the solvent within the cleaning machine, or
  - (2) Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal and a freeboard ration of 0.75 or greater.
- (b) Each owner or operator of a remote -reservoir batch cold solvent cleaning machine shall employ a tightly fitting cover over the solvent pump that shall be closed at all times except during the cleaning of parts.
- (c) Each owner or operator of a batch cold solvent cleaning machine shall comply with the following work and operational practice requirements:
  - (1) All waste solvent shall be collected and stored in closed containers. The closed container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container.
  - (2) If a flexible hose or flushing device is used, flushing shall be performed only within the freeboard area of the solvent cleaning machine.
  - (3) The owner or operator shall drain solvent cleaned parts for 15 seconds or until dripping has stopped, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while draining.
  - (4) The owner or operator shall ensure that the solvent level does not exceed the fill line.
  - (5) Spills during solvent transfer shall be wiped up immediately. The wipe rags shall be stored in covered containers meeting the requirements of (1) of this section.

- (6) When an air- or pump-agitated solvent bath is used, the owner or operator shall ensure the agitator is operated to produce a rolling motion of the solvent but not observable splashing against tank walls or parts being cleaned.
- (7) The owner or operator shall ensure that, when the cover is open, the cold cleaning machine is not exposed to drafts greater than 40 meters per minute (132 feet per minute), as measured between 1 and 2 meters (3.3 and 6.6 feet) upwind and at the same elevation as the tank lip.
- (8) Sponges, fabric, wood and paper products shall not be cleaned.

#### **D.5.8 Particulate Matter (PM)**

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The baghouses for PM control shall be in operation at all times when the two (2) calcium carbonate silos, known as SILO2 and SILO3, are in operation and exhausting to the outside atmosphere.

### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### **D.5.9 Visible Emissions Notations**

---

- (a) Visible emission notations of the SILO2 and SILO3 stack 25.2 and 25.3 exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

#### **D.5.10 Parametric Monitoring**

---

The Permittee shall record the total static pressure drop across the baghouses used in conjunction with SILO2 and SILO3, at least once daily when SILO2 and/or SILO3 are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 4.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

#### D.5.11 Baghouse Inspections

---

An inspection shall be performed each calendar quarter of all bags controlling the SILO2 and SILO3 operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

#### D.5.12 Broken or Failed Bag Detection

---

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.5.13 Record Keeping Requirements

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- (a) To document compliance with Conditions D.5.1 and D.5.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAPs usage limits and the VOC and HAPs emission limits established in Conditions D.5.1 and D.5.2.
  - (1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The cleanup solvent usage for each month;
  - (4) The total VOC and HAPs usage for each month; and
  - (5) The weight of VOCs and HAPs emitted for each compliance period.
- (b) To document compliance with Condition D.5.9, the Permittee shall maintain records of daily visible emission notations of the SILO2 and SILO3 stack exhausts.

- (c) To document compliance with Condition D.5.10, the Permittee shall maintain the following:
  - (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
    - (A) Inlet and outlet differential static pressure; and
    - (B) Cleaning cycle: frequency and differential pressure
  - (2) Documentation of all response steps implemented, per event .
  - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
  - (4) Quality Assurance/Quality Control (QA/QC) procedures.
  - (5) Operator standard operating procedures (SOP).
  - (6) Manufacturer's specifications or its equivalent.
  - (7) Equipment "troubleshooting" contingency plan.
  - (8) Documentation of the dates vents are redirected.
- (d) To document compliance with Condition D.5.11, the Permittee shall maintain records of the results of the inspections required under Condition D.5.11 and the dates the vents are redirected.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.5.14 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Condition D.5.1 and D.5.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.
- (b) Submit an initial notification report immediately to the address listed in Section C - General Reporting Requirements, of this permit, and to the following address:

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

The report shall include the following information:

- (1) The name and address of the owner or operator;
- (2) The address of the solvent cleaning machine;



- (3) A brief description of each solvent cleaning machine including machine type, solvent/air interface area and existing controls;
  - (4) The date of installation for the solvent cleaning machine;
  - (5) The anticipated compliance approach for the solvent cleaning machine;
  - (6) An estimated annual halogenated HAP solvent consumption for the solvent cleaning machine.
- (c) Submit an initial statement of compliance for the solvent cleaning machine. This statement shall include:
- (1) The name and address of the owner or operator;
  - (2) The address of the solvent cleaning machine;
  - (3) A statement, signed by the owner or operator of the solvent cleaning machine, stating that the solvent cleaning machine for which the report is being submitted is in compliance with Condition D.5.7.
  - (4) The compliance approach for each solvent cleaning machine.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: ThermaTru Corporation  
Source Address: 108 Mutzfeld Road, Butler, Indiana 46721  
Mailing Address: 108 Mutzfeld Road, Butler, Indiana 46721  
Source Mod. No.: SSM 033-10998-00019  
Facility: Sheet Molding Compound Line  
Parameter: VOC  
Limit: Less than twenty five (25) tons per twelve (12) consecutive month period

YEAR: \_\_\_\_\_

Month	VOC Emissions This Month (tons)	VOC Emissions Previous 11 Months (tons)	VOC Emissions 12 Month Total (tons)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Therma Tru Corporation  
Source Address: 108 Mutzfeld Road, Butler, Indiana 46721  
Mailing Address: 108 Mutzfeld Road, Butler, Indiana 46721  
Source Mod. No.: SSM 033-10998-00019  
Facility: Sheet Molding Compound Line  
Parameter: VOC  
Limit: Single HAP and Combination of HAPs Less than ten (10) and twenty five tons per twelve (12) consecutive month period, respectively

YEAR: \_\_\_\_\_

Month	This Month (tons)		Previous 11 Months (tons)		12 Month Total (tons)	
	Single HAP	Combination of HAPs	Single HAP	Combination of HAPs	Single HAP	Combination of HAPs

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

## Indiana Department of Environmental Management Office of Air Management

### Addendum to the Technical Support Document for a Significant Source Modification to a Part 70 Operating Permit

<b>Source Name:</b>	<b>ThermaTru Corporation</b>
<b>Source Location:</b>	<b>108 Mutzfeld Road, Butler, Indiana 46721</b>
<b>County:</b>	<b>DeKalb</b>
<b>Operation Permit No.:</b>	<b>T 033-7972-00019</b>
<b>Significant Source Modification No.:</b>	<b>033-10998-00019</b>
<b>SIC Code:</b>	<b>3442 and 3089</b>
<b>Permit Reviewer:</b>	<b>Mark L. Kramer</b>

On December 21, 1999, the Office of Air Management (OAM) had a notice published in the Auburn Evening Star, Auburn, Indiana, stating that ThermaTru Corporation had applied for a Significant Source Modification to a Part 70 Operating Permit to construct a door assembly line and a sheet molding compound production line. The notice also stated that OAM proposed to issue a Significant Source Modification and provided information on how the public could review the proposed Significant Source Modification and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Significant Source Modification to a Part 70 Operating Permit should be issued as proposed.

On January 13, 2000, Emily A. Covert of The Payne Firm, Inc., submitted comments on the proposed modification. The summary of the comments and corresponding responses are as follows: The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded**):

#### Comment 1:

In the letter from Mr. Paul Dubenetzky, the door machining station is listed as having a capacity of 450 doors per hour or 12,600 pounds per hour. The weight of each door is actually 45 pounds, which would make the capacity 20,250 pounds per hour as with (a), the electric door skin preheat oven. It appears that although the correct throughput was included on process diagrams, the 12,600 number may have inadvertently gone uncorrected on one of the permit application forms, hence this error. The error appears throughout the permit and technical support document. The following are the page numbers and item numbers where this error is found:

Page	Item Number	Correction
5a of 44	(12)	Change 12,600 to 20,250
39a of 44	Section D.4 (two places)	Same as above
39b of 44	Section D.4.3(a)	The allowable emissions rate should be 19.31 pounds per hour given a process weight rate of 10.1 tons per hour (20,250 pounds per hour)
1 of 31 TSD	(f)	Change 12,600 to 20,250
14 of 31 TSD	Door Assembly line - header and (12)	Same as above
16 of 31 TSD	Same as above	Same as above

Please note that the error may exist in other portions of the permit. This table represents our best understanding of the locations where the wrong number was used.

**Response 1:**

The capacity has been changed from 12,600 to 20,250 pounds per hour in the heading and for the door machining station as follows. The emission calculations do not need to be revised since they were based on the number of doors per hour, not on the weight rate. The allowable PM emission rate in Condition D.4.3(a) and (b) has been revised based on this corrected process weight rate as follows:

**A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]**  
**[326 IAC 2-7-5(15)]**

This stationary source consists of the following emission units and pollution control devices:

Door Assembly Line, capacity: **20,250** ~~12,600~~ pounds of doors per hour or 450 doors per hour

- (12) One (1) door machining station, known as D2-MS1, equipped with a baghouse and cyclone connected in series, known as D2-DC1, exhausting through Stack 20.1, capacity: 450 doors per hour or **20,250** ~~12,600~~ pounds per hour.

**SECTION D.4**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

Door Assembly Line, capacity: **20,250** ~~12,600~~ pounds of doors per hour or 450 doors per hour, consisting of:

- (12) One (1) door machining station, known as D2-MS1, equipped with a baghouse and cyclone connected in series, known as D2-DC1, exhausting through Stack 20.1, capacity: 450 doors per hour or **20,250** ~~12,600~~ pounds per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**D.4.3 Particulate Matter (PM) [326 IAC 6-3-2(c)]**

- (a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the door assembly line adhesive application station shall not exceed **19.3** ~~14.4~~ pounds per hour when operating at a process weight rate of **10.1** ~~6.30~~ tons per hour.
- (b) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the door machining station, known as D2-MS1, equipped with a baghouse and cyclone connected in series, known as D2-DC1, shall not exceed **19.3** ~~14.4~~ pounds per hour when operating at a process weight rate of **10.1** ~~6.30~~ tons per hour.

**Comment 2:**

In addition to these changes, a few general questions were raised:

Subpart D.5.14 references a Section C - General Reporting. Where is this section?  
The permit skips from page 6 of 44 to page 39a of 44 and excludes all of Sections B and C.

**Response 2:**

The modification is to the existing Part 70 Operating Permit and as stated in the significant permit modification all other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

## **Indiana Department of Environmental Management Office of Air Management**

### **Technical Support Document (TSD) for a Part 70 Significant Source Modification**

#### **Source Background and Description**

<b>Source Name:</b>	<b>ThermaTru Corporation</b>
<b>Source Location:</b>	<b>108 Mutzfeld Road, Butler, Indiana 46721</b>
<b>County:</b>	<b>DeKalb</b>
<b>SIC Code:</b>	<b>3442 and 3089</b>
<b>Operation Permit No.:</b>	<b>T 033-7929-00019</b>
<b>Operation Permit Issuance Date:</b>	<b>November 12, 1998</b>
<b>Significant Source Modification No.:</b>	<b>SSM 033-10998-00019</b>
<b>Permit Reviewer:</b>	<b>Mark L. Kramer</b>

The Office of Air Management (OAM) has reviewed a modification application from ThermaTru Corporation relating to the construction of the following emission units and pollution control devices:

#### **Door Assembly Line, capacity: 12,600 pounds of doors per hour or 450 doors per hour**

- (a) One (1) electric door skin preheat oven, known as D2-OV1, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.1, capacity: 20,250 pounds per hour of fiberglass door skins per hour or 450 doors per hour.
- (b) One (1) adhesive application station, known as D2-APP1, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.2, capacity, 43 pounds of adhesive per hour or 450 doors per hour.
- (c) One (1) electric glue curing oven, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.2, known as D2-OV2, capacity: 450 doors per hour.
- (d) One (1) electric skin reheat oven, known as D2-OV3, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.3, capacity: 450 doors per hour.
- (e) One (1) door foam injection system, known as D2-F1, exhausting through Stack 19.1, capacity: 2,300 pounds of resin and foam insulation per hour or 450 doors per hour.
- (f) One (1) door machining station, known as D2-MS1, equipped with a baghouse and cyclone connected in series, known as D2-DC1, exhausting through Stack 20.1, capacity: 450 doors per hour or 12,600 pounds per hour.

#### **New Skins Warehouse**

Molding Plant Sheet Molding Compound Production Line, known as SMC2, capacity: 18,500 pounds of molding compound per hour, consisting of:

- (g) One (1) existing permitted calcium carbonate silo to be relocated, equipped with a baghouse, known as SILO1, exhausting through Stacks 25.1, capacity: 150,000 pounds calcium carbonate.
- (h) Two (2) calcium carbonate silos, known as SILO2 and SILO3, each equipped with a baghouse, exhausting through Stacks 25.2 and 25.3, throughput: 2,960 pounds of calcium carbonate per hour each, capacity: 150,000 pounds calcium carbonate, each.
- (i) One (1) resin mixer, exhausting through Stack 17.1 and/or Stack 17.2, throughput: 8,880 pounds of calcium carbonate, 4,700 pounds of resin, 648 pounds of pigment mixture, 130 pounds of release agent, and 74 pounds of catalyst per hour.
- (j) One (1) sheet molding compound extruder, exhausting through Stack 17.1 and/or Stack 17.2, throughput 14,432 pounds of materials plus 4,070 pounds of chopped fiberglass strands per hour.
- (k) One (1) sheet molding compound press, throughput 18,500 pounds of sheet molding compound per hour.
- (l) One (1) hose cleaning re-circulation station, (cold cleaner tank, known as SMC-CC2), exhausting through Stack 17.1 and/or Stack 17.2, capacity: 0.957 pounds of methylene chloride per hour (based on 20 hours per day at 1.75 gallons per day).

**New Skins Warehouse (Insignificant Activities)**

- (m) Two (2) above ground resin storage tanks to be relocated or removed from service, known as B-1 and B-2, capacity: 8,000 gallons, each.
- (n) Six (6) above ground resin storage tanks, known as B3-B8 or MTANK-3 through MTANK-8, exhausting through Stack 17.1 and/or Stack 17.2, capacity: 10,000 gallons each, throughput 4,700 pounds of resin per hour.
- (o) Six (6) space heaters, known as M-MAU-1 and M-MAU-2, rated at 8.80 million British thermal units per hour, each, and M-MAU-3 through M-MAU-6, rated at 0.550 million British thermal units per hour, each.
- (p) Four (4) exhaust fans.

**New Door Warehouse (Insignificant Activities)**

- (q) Seven (7) space heaters, known as D-MAU-1 through D-MAU-3, rated at 8.80 million British thermal units per hour, each, and D-MAU-4 through D-MAU-7, rated at 0.550 million British thermal units per hour, each.
- (r) Four (4) exhaust fans.

In addition, the existing EU6.1 will be phased out after both degreasing units are in operation for approximately two (2) months. Degreasing operations, identified as EU6, consisting of one (1) Safety Kleen cold cleaner will be unaffected, exhausting to stacks 6.10 and 6.13 and the one (1) methylene chloride cold cleaner which exhausts to stacks 12.4, and 13.4 will be phased out.



## History

On May 24, 1999, ThermaTru Corporation submitted an application to the OAM requesting to add a new door assembly line and a sheet molding compound production line to their existing plant. ThermaTru Corporation was issued a Part 70 permit on November 12, 1998.

## Air Pollution Control Justification as an Integral Part of the Process

The company has previously submitted the following justification that the baghouses be considered as an integral part of the calcium carbonate silo operations:

The transfer of calcium carbonate takes place by air displacement, with the displaced air being re-directed to the silo. The air displacement creates a significant pressure difference that is neutralized by the baghouses. Therefore, the baghouses provide for a "breathing" mechanism for the silos. For this reason, the source believes that the baghouses are an integral part of the silos.

IDEM, OAM has evaluated the justifications and determined that the baghouses will not be considered as an integral part of the calcium carbonate silo operations. Therefore, the permitting level will be determined using the potential emissions before the baghouses.

## Enforcement Issue

There are no enforcement actions pending.

## Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
<b>Door Assembly Line 6.8</b>	Door skin preheat (D2-OV1), glue curing (D2-OV2) & skin reheat (D2-OV3) ovens and adhesive application station (D2-APP1)	30	3.19	8,000	70
7.2	Door skin preheat (D2-OV1), glue curing (D2-OV2) & skin reheat (D2-OV3) ovens and adhesive application station (D2-APP1)	30	3.09	8,000	70
18.1	Door skin preheat oven (D2-OV1)	30	n/a	n/a	n/a
18.2	Adhesive application station (D2-APP1) and glue curing (D2-OV2)	30	2.3	4,134	150
18.3	Skin reheat oven (D2-OV3)	30	1.25	1,500	150
19.1	Foam injection system (D2-F1)	30	2.3	5,000	70
20.1	Dust collector (D2-DC1)	12.5	3.0	45,000	70

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
<b>Molding/ SMC2 17.1</b>	Resin tanks (B1-B8), resin mixer, SMC extruder, and hose cleaning tank	30	5.19	25,000	70
17.2	Resin tanks (B1-B8), resin mixer, SMC extruder, and hose cleaning tank	30	5.19	25,000	70
25.1, 25.2 & 25.3	Silo vent dust collectors	60	0.25	2,000	70

### Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on May 24, 1999. Additional information was received on September 28, October 22, 25 and 27, as well as November 12 and November 23, 1999.

### Emission Calculations

See pages 1 - 4 of 6 of Appendix A of this document for detailed emissions calculations for the significant emission units and pages 5 and 6 of 6 for the insignificant natural gas combustion emissions. Note, the emission calculations for the fiberglass processing in the sheet molding compound production line were confidential and only the total potential styrene emissions are listed. The spreadsheet utilized annual actual emissions calculated with a three percent (3%) flashoff factor scaled to potential VOC emissions for the capacity of the new line.

### Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA."

This table reflects the PTE before controls of all significant emission units and insignificant activities. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

<b>Pollutant</b>	<b>Potential To Emit (tons/year)</b>
PM	1,885
PM <sub>10</sub>	1,886
SO <sub>2</sub>	0.127
VOC	218
CO	17.8
NO <sub>x</sub>	21.2

<b>HAPs</b>	<b>Potential To Emit (tons/year)</b>
Glycol Ethers	9.22
MDI	0.004
Styrene	205
Propylene Oxide	0.210
Methylene Chloride	4.17
Benzene	0.000
Dichlorobenzene	0.000
Formaldehyde	0.016
Hexane	0.382
Toluene	0.001
Lead Compounds	0.000
Cadmium Compounds	0.000
Chromium Compounds	0.000
Manganese Compounds	0.000
Nickel Compounds	0.000
TOTAL	219

#### Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4) since the potential to emit VOC and PM from this modification are greater than twenty-five (25) tons per year.

### County Attainment Status

The source is located in DeKalb County.

Pollutant	Status
PM <sub>10</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. DeKalb County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) DeKalb County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions

Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	242.2
PM <sub>10</sub>	242.2
SO <sub>2</sub>	0
VOC	145.5
CO	negligible
NO <sub>x</sub>	negligible

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon based on the Technical Support Document for T-033-7927-00019 listed on page 5 of 12.

### Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Door Assembly Line	62.2	62.2	0.00	11.5	0.00	0.00	9.22
Sheet Molding Compound Production Line	1.50	1.50	0.00	< 25	0.00	0.00	< 25
Insignificant Activities	0.403	1.61	0.127	1.17	17.8	21.2	0.400
Total	64.1	65.3	0.127	< 37.7	17.8	21.2	< 34.6
PSD Threshold Level	250	250	250	250	250	250	

- (a) This modification to an existing minor stationary source is not major because the emission increase is less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply. After this modification is completed, this source will be considered a major PSD source for PM and PM<sub>10</sub>.
- (b) The VOC emissions from the sheet molding compound production line are limited to less than twenty-five (25) tons per year. Therefore, 326 IAC 8-1-6 requirements do not apply.
- (c) The worst case single HAP and the combination of all HAPs from the sheet molding compound production line are limited to less than ten (10) and twenty-five (25) tons per year, respectively. Therefore, the requirements 326 IAC 2-1-3.4 (New source toxics control) are not applicable to this line.

### Federal Rule Applicability

- (a) The six (6) above ground resin storage tanks, known as B3-B8, or MTHANK-3 through MTANK-8, with capacities of 10,000 gallons each, are not subject to New Source Performance Standards (NSPS), 326 IAC 12, (40 CFR Part 60.110b, Subpart Kb) because their capacity is less than 40 cubic meters, each.

- (b) The degreasing facility (SMC-CC2) is subject to the National Emission Standards for Hazardous Air Pollutants, 326 IAC 14, (40 CFR 63, Subpart T), because the material used is methylene chloride, which is considered a halogenated solvent.

The following design requirements for the degreasing operation are applicable:

- (1) Each owner or operator of an immersion batch cold solvent cleaning machine shall comply with the requirement of one of the following:
  - (A) Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal, and a water layer at a minimum thickness of 2.5 centimeters (1.0 inch) on the surface of the solvent within the cleaning machine, or
  - (B) Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal and a freeboard ration of 0.75 or greater.
- (2) Each owner or operator of a remote -reservoir batch cold solvent cleaning machine shall employ a tightly fitting cover over the solvent pump that shall be closed at all times except during the cleaning of parts.
- (3) Each owner or operator of a batch cold solvent cleaning machine shall comply with the following work and operational practice requirements:
  - (A) All waste solvent shall be collected and stored in closed containers. The closed container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container.
  - (B) If a flexible hose or flushing device is used, flushing shall be performed only within the freeboard area of the solvent cleaning machine.
  - (C) The owner or operator shall drain solvent cleaned parts for 15 seconds or until dripping has stopped, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while draining.
  - (D) The owner or operator shall ensure that the solvent level does not exceed the fill line.
  - (E) Spills during solvent transfer shall be wiped up immediately. The wipe rags shall be stored in covered containers meeting the requirements of (1) of this section.
  - (F) When an air- or pump-agitated solvent bath is used, the owner or operator shall ensure the agitator is operated to produce a rolling motion of the solvent but not observable splashing against tank walls or parts being cleaned.
  - (G) The owner or operator shall ensure that, when the cover is open, the cold cleaning machine is not exposed to drafts greater than 40 meters per minute (132 feet per minute), as measured between 1 and 2 meters (3.3 and 6.6 feet) upwind and at the same elevation as the tank lip.

(H) Sponges, fabric, wood and paper products shall not be cleaned.

- (4) Each owner or operator of a batch cold cleaning machine shall submit an initial certification report and a compliance report as indicated in the degreasing NESHAP.

#### **State Rule Applicability - Individual Facilities**

##### **326 IAC 2-1-3.4 (New source toxics control)**

- (a) The sheet molding compound production line has potential emissions of a single HAP and a combination of HAPs that exceed the major source levels of ten (10) and twenty-five (25) tons per year, respectively. The source has agreed to limit the emissions of a single HAP to less than ten (10) tons per year and a combination of HAPs to less than twenty-five (25) tons per year and thus this rule does not apply.
- (b) The potential single and combination HAPs emissions from the adhesive application station are 9.22 tons per year. Therefore, this operation is not major for HAPs and thus this rule does not apply.

##### **326 IAC 2-2 Prevention of Significant Deterioration**

This modification is a minor modification to an existing minor PSD source since all emissions, after controls and limits, are less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

The source will be considered an existing major PSD source after the construction of this modification since PM and PM<sub>10</sub> emissions after controls and limits will exceed two hundred and fifty (250) tons per year.

##### **326 IAC 2-7-5(13) (Preventive Maintenance Plan)**

- (a) A Preventive Maintenance Plan is required for the door assembly line adhesive application station because the emission unit does not have controls and actual PM emissions may exceed twenty five (25) tons per year.
- (b) A Preventive Maintenance Plan is required for the door machining station, known as D2-MS1, because:
- (1) The allowable PM emissions exceed ten (10) pounds per hour, and
- (2) There is a PM control device operating with this emission unit.
- (c) A Preventive Maintenance Plan is required for the sheet molding compound production line because VOC and HAPs emissions are limited to avoid the requirements of 326 IAC 8-1-6 and 326 IAC 2-1-3.4.
- (d) A Preventive Maintenance Plan is not required for the calcium carbonate storage, SILO2 and SILO3 operations because:
- (1) There are control devices for these facilities, and

- (2) The allowable PM emissions are less than ten (10) pounds per hour.

326 IAC 6-3-2 (Process Operations)

- (a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the sheet molding compound production line shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad \begin{array}{l} E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour (9.25)} \end{array}$$

$$E = 4.10 (9.25)^{0.67}; E = 18.2 \text{ pounds per hour}$$

Since there are no PM emissions from this sheet molding process, the sheet molding compound production line is in compliance with this rule.

- (b) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the adhesive application station shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad \begin{array}{l} E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour (6.30)} \end{array}$$

$$E = 4.10 (6.30)^{0.67}; E = 14.1 \text{ pounds per hour}$$

The potential PM emissions from the spray adhesive operation are 45.3 tons per year, equivalent to 10.3 pounds per hour. Therefore, the adhesive application station complies with this rule.

- (c) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the door machining operations shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad \begin{array}{l} E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour (6.30)} \end{array}$$

$$E = 4.10 (6.30)^{0.67}; E = 14.1 \text{ pounds per hour}$$

The baghouse shall be in operation at all times machining is in operation, in order to comply with this limit. The potential PM emissions from the machining station after control are 2.53 pounds per hour as shown on Page 5 of 7 of Appendix A. Therefore, the machining operation complies with this rule.



- (d) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the calcium carbonate storage SILO2 and SILO3 operations shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad \begin{array}{l} E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour (1.48) each} \end{array}$$

$$E = 4.10 (1.48)^{0.67}; E = 5.33 \text{ pounds per hour, each}$$

The potential PM emissions from each silo after control are 0.171 pounds per hour and therefore comply with this rule. The baghouses shall be in operation at all times the calcium carbonate silos are in operation, in order to comply with these allowable PM emission rates.

326 IAC 8-1-6 (New facilities; general reduction requirements)

- (a) The potential VOC emissions from the sheet molding compound production line exceed twenty-five (25) tons per year. The source has agreed to limit VOC emissions from this sheet molding compound production line to less than twenty-five (25) tons per year. Therefore, this rule is not applicable to the sheet molding compound production line.
- (b) The potential VOC emissions from the adhesive application station of the door assembly line are less than twenty-five (25) tons per year and therefore this rule does not apply.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

The door assembly line adhesive application station, known as D2-APP1, applies adhesives to metal and fiberglass door skins. Since this facility emits more than fifteen (15) pounds of VOC per day, pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings delivered to the applicators shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the adhesive application station is in compliance with this requirement.

326 IAC 8-3-5 (Cold cleaner degreaser operation and control)

- (a) Pursuant to 326 IAC 8-3-5, the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can easily be operated with one (1) hand if:
- (A) the solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));

- (B) the solvent is agitated; or
  - (C) the solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):
  - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) The owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
  - (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

## Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

- (a) The sheet molding compound production line has applicable monitoring conditions as specified below:
  - (1) Record keeping of information sufficient to show that VOC from the sheet molding compound production line do not exceed twenty-five (25) tons per year, based on a twelve (12) month consecutive period calculated with actual styrene content and a three (3%) flashoff factor.
  - (2) Record keeping of information sufficient to show that the single HAP and combination of HAPs from the sheet molding compound production line do not exceed ten (10) tons per year and twenty-five (25) tons per year, respectively, based on a twelve (12) month consecutive period calculated with the actual HAPs content and a three (3%) flashoff factor.

These monitoring conditions are necessary to show the non-applicability of 326 IAC 8-1-6 and 326 IAC 2-1-3.4.

- (b) The machining and silo operations have applicable compliance monitoring conditions as specified below:
  - (1) Visible emissions notations of the machining operation and silo exhausts shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

- (2) The Permittee shall record the total static pressure drop across the machining operation (D2-DC1), SILO2 and SILO3 baghouses controlling the machining and silo operations, at least once daily when the machining and the silos are in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across each baghouse shall be maintained within the range of 4.0 to 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

These monitoring conditions are necessary because the baghouse for the machining operation must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

### Proposed Changes

The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language appears in **bold**):

#### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

- (1) Fiberglass operations, identified as EU1, consisting of one (1) resin mixer, one (1) fiberglass extruder (SMC) and six (6) fiberglass presses, with a maximum capacity of 17,280 pounds of resin per hour, and exhausting to stacks 13.1, 13.2 13.3 and 13.4
- (2) One door skin gluing operation, identified as EU2, with a maximum capacity of 360 doors per hour, and exhausting to stacks 1.1 and 1.2.
- (3) One (1) flowcoating operation, identified as EU3, consisting of one (1) flowcoater, one (1) flash off tunnel and one (1) paint cure oven, with a maximum capacity of 360 doors per hour, and exhausting to stacks 3.1and 3.2, 4.1and 4.2, and 4.3 and 4.4 respectively.
- (4) One (1) machining station, identified as EU4, with a maximum capacity of 360 doors per hour, using a dust collector for particulate emission control, and exhausting to stack 5.1.
- (5) One (1) calcium carbonate storage silo, identified as EU5, with a maximum throughput of 16,500 pounds per day, and using a baghouse for particulate control.
- (6) Degreasing operations, identified as EU6, consisting of one (1) Safety Kleen cold cleaner and one (1) methylene chloride cold cleaner, exhausting to stacks 13.1, 13.2, 13.3 and 13.4.

#### **Door Assembly Line, capacity: 12,600 pounds of doors per hour or 450 doors per hour**

- (7) **One (1) electric door skin preheat oven, known as D2-OV1, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.1, capacity: 20,250 pounds per hour of fiberglass door skins per hour or 450 doors per hour.**
- (8) **One (1) adhesive application station, known as D2-APP1, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.2, capacity, 43 pounds of adhesive per hour or 450 doors per hour.**

- (9) One (1) electric glue curing oven, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.2, known as D2-OV2, capacity: 450 doors per hour.
- (10) One (1) electric skin reheat oven, known as D2-OV3, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.3, capacity: 450 doors per hour.
- (11) One (1) door foam injection system, known as D2-F1, exhausting through Stack 19.1, capacity: 2,300 pounds of resin and foam insulation per hour or 450 doors per hour.
- (12) One (1) door machining station, known as D2-MS1, equipped with a baghouse and cyclone connected in series, known as D2-DC1, exhausting through Stack 20.1, capacity: 450 doors per hour or 12,600 pounds per hour.

#### **New Skins Warehouse**

**Molding Plant Sheet Molding Compound Production Line, known as SMC2, capacity: 18,500 pounds of molding compound per hour, consisting of:**

- (13) One (1) existing permitted calcium carbonate silo to be relocated, equipped with a baghouse, known as SILO1, exhausting through Stacks 25.1, capacity: 150,000 pounds calcium carbonate.
- (14) Two (2) calcium carbonate silos, known as SILO2 and SILO3, each equipped with a baghouse, exhausting through Stacks 25.2 and 25.3, throughput: 2,960 pounds of calcium carbonate per hour each, capacity: 150,000 pounds calcium carbonate, each.
- (15) One (1) resin mixer, exhausting through Stack 17.1 and/or Stack 17.2, throughput: 8,880 pounds of calcium carbonate, 4,700 pounds of resin, 648 pounds of pigment mixture, 130 pounds of release agent, and 74 pounds of catalyst per hour.
- (16) One (1) sheet molding compound extruder, exhausting through Stack 17.1 and/or Stack 17.2, throughput 14,432 pounds of materials plus 4,070 pounds of chopped fiberglass strands per hour.
- (17) One (1) sheet molding compound press, throughput 18,500 pounds of sheet molding compound per hour.
- (18) One (1) hose cleaning re-circulation station, (cold cleaner tank, known as SMC-CC2), exhausting through Stack 17.1 and/or Stack 17.2, capacity: 0.957 pounds of methylene chloride per hour (based on 20 hours per day at 1.75 gallons per day).

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]  
[326 IAC 2-7-5(15)]

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This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
- (2) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (3) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.
- (4) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (5) Water based adhesives that are less than or equal to 5% by volume of VOC's excluding HAPs.
- (6) Paved and unpaved roads and parking lots with public access.
- (7) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic feet and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking.
- (8) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kiloPascals measured at 38 degrees C).
- (9) A laboratory as defined in 326 IAC 2-7-1(21)(C).
- (10) One foam press with VOC emissions less than 3 lb/hr and 15 lbs/day.
- (11) Two five thousand (5,000) gallon tanks storing urethane system resin component with VOC emissions less than 3 lb/hr and 15 lbs/day.
- (12) Two five thousand (5,000) gallon tanks storing polymethylene polyphenylisocyanate (poly) with VOC emissions less than 3 lb/hr and 15 lbs/day.
- (13) **Six (6) above ground resin storage tanks, known as B3-B8 or MTANK-3 through MTANK-8, exhausting through Stack 17.1 and/or Stack 17.2, capacity: 10,000 gallons each, throughput 4,700 pounds of resin per hour with VOC emissions less than 3 lbs/hr and 15 lbs/day.**

**SECTION D.4**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

**Door Assembly Line, capacity: 12,600 pounds of doors per hour or 450 doors per hour, consisting of:**

- (7) One (1) electric door skin preheat oven, known as D2-OV1, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.1, capacity: 20,250 pounds per hour of fiberglass door skins per hour or 450 doors per hour.**
- (8) One (1) adhesive application station, known as D2-APP1, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.2, capacity, 43 pounds of adhesive per hour or 450 doors per hour.**
- (9) One (1) electric glue curing oven, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.2, known as D2-OV2, capacity: 450 doors per hour.**
- (10) One (1) electric skin reheat oven, known as D2-OV3, exhausting through Stack 6.8 and/or Stack 7.2 and/or Stack 18.3, capacity: 450 doors per hour.**
- (11) One (1) door foam injection system, known as D2-F1, exhausting through Stack 19.1, capacity: 2,300 pounds of resin and foam insulation per hour or 450 doors per hour.**
- (12) One (1) door machining station, known as D2-MS1, equipped with a baghouse and cyclone connected in series, known as D2-DC1, exhausting through Stack 20.1, capacity: 450 doors per hour or 12,600 pounds per hour.**

**(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]**

**Any change or modification which may increase the potential emissions of VOC to twenty-five (25) tons per year from the door assembly line adhesive application station must be approved by the Office of Air Management before such change may occur.**

**D.4.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]**

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating), the volatile organic compound (VOC) content of coating delivered to the applicator at the door assembly line adhesive application station shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.**
- (b) Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.**

**D.4.3 Particulate Matter (PM) [326 IAC 6-3-2(c)]**

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- (a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the door assembly line adhesive application station shall not exceed 14.1 pounds per hour when operating at a process weight rate of 6.30 tons per hour.
- (b) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the door machining station, known as D2-MS1, equipped with a baghouse and cyclone connected in series, known as D2-DC1, shall not exceed 14.1 pounds per hour when operating at a process weight rate of 6.30 tons per hour.
- (c) The pounds per hour limitations were calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad \begin{array}{l} E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour} \end{array}$$

**D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the door assembly line adhesive application station and the door machining station and any control devices.

**Compliance Determination Requirements**

**D.4.5 Testing Requirements [326 IAC 2-7-6(1)]**

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- (a) Within 180 days after start-up of the door machining station, known as D2-MS1, the Permittee shall perform PM testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.
- (b) The Permittee is not required to test the adhesive application station by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the adhesive application station is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.4.3(a) shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

**D.4.6 Volatile Organic Compounds (VOC)**

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Compliance with the VOC content contained in Conditions D.4.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

**D.4.7 Particulate Matter (PM)**

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The baghouse and cyclone in series for PM control shall be in operation and control emissions from the door machining station at all times that the door machining is in operation.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**



#### **D.4.8 Monitoring**

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- (a) Monthly inspections shall be performed of the adhesive application station coating emissions from the stacks and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

#### **D.4.9 Visible Emissions Notations**

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- (a) Visible emission notations of the door machining station stack 20.1 exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

#### **D.4.10 Parametric Monitoring**

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The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the door machining station, at least once daily when the machining station is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 4.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

#### **D.4.11 Baghouse Inspections**

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An inspection shall be performed each calendar quarter of all bags controlling the door machining station operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

#### **D.4.12 Broken or Failed Bag Detection**

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In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### **D.4.13 Cyclone Inspections**

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An inspection shall be performed each calendar quarter of all cyclones controlling the door machining operation when venting to the atmosphere. A cyclone inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.

#### **D.4.14 Cyclone Failure Detection**

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In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### **D.4.15 Record Keeping Requirements**

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- (a) To document compliance with Condition D.4.8, the Permittee shall maintain a log of monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (b) To document compliance with Condition D.4.9, the Permittee shall maintain records of daily visible emission notations of the door machining station stack exhaust.
- (c) To document compliance with Condition D.4.10, the Permittee shall maintain the following:

- (1) **Daily records of the following operational parameters during normal operation when venting to the atmosphere:**
    - (A) **Inlet and outlet differential static pressure; and**
    - (B) **Cleaning cycle: frequency and differential pressure.**
  - (2) **Documentation of all response steps implemented, per event .**
  - (3) **Operation and preventive maintenance logs, including work purchases orders, shall be maintained.**
  - (4) **Quality Assurance/Quality Control (QA/QC) procedures.**
  - (5) **Operator standard operating procedures (SOP).**
  - (6) **Manufacturer's specifications or its equivalent.**
  - (7) **Equipment "troubleshooting" contingency plan.**
  - (8) **Documentation of the dates vents are redirected.**
- (d) **To document compliance with Conditions D.4.11 and D.4.13, the Permittee shall maintain records of the results of the inspections required under Conditions D.4.11 and D.4.13 and the dates the vents are redirected.**
- (e) **All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.**

**SECTION D.5**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]**

**Molding Plant Sheet Molding Compound Production Line, known as SMC2, capacity: 18,500 pounds of molding compound per hour, consisting of:**

- (13) One (1) existing permitted calcium carbonate silo to be relocated, equipped with a bag-house, known as SILO1, exhausting through Stacks 25.1, capacity: 150,000 pounds calcium carbonate.**
- (14) Two (2) calcium carbonate silos, known as SILO2 and SILO3, each equipped with a bag-house, exhausting through Stacks 25.2 and 25.3, throughput: 2,960 pounds of calcium carbonate per hour each, capacity: 150,000 pounds calcium carbonate, each.**
- (15) One (1) resin mixer, exhausting through Stack 17.1 and/or Stack 17.2, throughput: 8,880 pounds of calcium carbonate, 4,700 pounds of resin, 648 pounds of pigment mixture, 130 pounds of release agent, and 74 pounds of catalyst per hour.**
- (16) One (1) sheet molding compound extruder, exhausting through Stack 17.1 and/or Stack 17.2, throughput 14,432 pounds of materials plus 4,070 pounds of chopped fiberglass strands per hour.**
- (17) One (1) sheet molding compound press, throughput 18,500 pounds of sheet molding compound per hour.**
- (18) One (1) hose cleaning re-circulation station, (cold cleaner tank, known as SMC-CC2), exhausting through Stack 17.1 and/or Stack 17.2, capacity: 0.957 pounds of methylene chloride per hour (based on 20 hours per day at 1.75 gallons per day).**

**(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)**

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

**D.5.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]**

The total potential to emit VOCs from the sheet molding compound production line shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period. The total potential to emit VOCs shall be calculated by multiplying the total mass of volatile organic compounds (VOC) in resins applied to the applicators times a flashoff factor of three percent (3%) from AP-42 or a lower emission factor substantiated by a performance test. In addition, any VOCs delivered to the applicators from the use of clean-up solvents and other materials shall be included in the total potential to emit VOCs from the sheet molding compound production line. Therefore, this VOC emission limit will render 326 IAC 8-1-6 not applicable to the sheet molding compound production line.

#### **D.5.2 HAPs [326 IAC 2-1-3.4]**

The total potential to emit a single and combination of HAPs from the sheet molding compound production line shall be limited to less than ten (10) and twenty-five (25) tons per twelve (12) consecutive month period, respectively. The total potential to emit HAPs shall be calculated by multiplying the total mass of HAPs in resins applied to the applicators times a flashoff factor of three percent (3%) from AP-42 or a lower emission factor substantiated by a performance test. In addition, any HAPs delivered to the applicators from the use of clean-up solvents and other materials shall be included in the total potential to emit HAPs from the sheet molding compound production line. Therefore, these HAPs limits will render 326 IAC 2-1-3.4 not applicable to the sheet molding compound production line.

#### **D.5.3 Volatile Organic Compounds (VOC)**

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

- (B) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
  - (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

#### **D.5.4 Particulate Matter (PM) [326 IAC 6-3]**

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- (a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the sheet molding compound production line shall not exceed 18.2 pounds per hour when operating at a process weight rate of 9.25 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad \begin{array}{l} E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour} \end{array}$$

- (b) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the calcium carbonate silos, known as SILO2 and SILO3, shall not exceed 5.33 pounds per hour each when operating at a process weight rate of 1.48 tons per hour each.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad \begin{array}{l} E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour} \end{array}$$

#### **D.5.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the sheet molding compound production line, including the hose cleaning re-circulation station, (cold cleaner tank, known as SMC-CC2).

## **Compliance Determination Requirements**

### **D.5.6 Testing Requirements [326 IAC 2-7-6(1)]**

The Permittee is not required to test these facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facilities are in compliance. If testing is required by IDEM, compliance with the PM limits specified in Condition D.5.4 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

### **D.5.7 Halogenated Solvent Cleaning Machine NESHAP [326 IAC 20-6][40 CFR Part 63, Subpart T]**

The hose cleaning re-circulation station, (cold cleaner tank, known as SMC-CC2) is subject to 40 CFR Part 63, Subpart T, (Halogenated Solvent Cleaning Machine NESHAP) that was promulgated on December 2, 1994.

The following design requirements for the degreasing operation are applicable:

- (a) Each owner or operator of an immersion batch cold solvent cleaning machine shall comply with the requirement of one of the following:
  - (1) Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal, and a water layer at a minimum thickness of 2.5 centimeters (1.0 inch) on the surface of the solvent within the cleaning machine, or
  - (2) Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal and a freeboard ration of 0.75 or greater.
- (b) Each owner or operator of a remote -reservoir batch cold solvent cleaning machine shall employ a tightly fitting cover over the solvent pump that shall be closed at all times except during the cleaning of parts.
- (c) Each owner or operator of a batch cold solvent cleaning machine shall comply with the following work and operational practice requirements:
  - (1) All waste solvent shall be collected and stored in closed containers. The closed container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container.
  - (2) If a flexible hose or flushing device is used, flushing shall be performed only within the freeboard area of the solvent cleaning machine.
  - (3) The owner or operator shall drain solvent cleaned parts for 15 seconds or until dripping has stopped, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while draining.
  - (4) The owner or operator shall ensure that the solvent level does not exceed the fill line.
  - (5) Spills during solvent transfer shall be wiped up immediately. The wipe rags shall be stored in covered containers meeting the requirements of (1) of this section.

- (6) When an air- or pump-agitated solvent bath is used, the owner or operator shall ensure the agitator is operated to produce a rolling motion of the solvent but not observable splashing against tank walls or parts being cleaned.
- (7) The owner or operator shall ensure that, when the cover is open, the cold cleaning machine is not exposed to drafts greater than 40 meters per minute (132 feet per minute), as measured between 1 and 2 meters (3.3 and 6.6 feet) upwind and at the same elevation as the tank lip.
- (8) Sponges, fabric, wood and paper products shall not be cleaned.

#### **D.5.8 Particulate Matter (PM)**

The baghouses for PM control shall be in operation at all times when the two (2) calcium carbonate silos, known as SILO2 and SILO3, are in operation and exhausting to the outside atmosphere.

#### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### **D.5.9 Visible Emissions Notations**

- (a) Visible emission notations of the SILO2 and SILO3 stack 25.2 and 25.3 exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

#### **D.5.10 Parametric Monitoring**

The Permittee shall record the total static pressure drop across the baghouses used in conjunction with SILO2 and SILO3, at least once daily when the SILO2 and/or SILO3 are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 4.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.



#### **D.5.11 Baghouse Inspections**

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An inspection shall be performed each calendar quarter of all bags controlling the SILO2 and SILO3 operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

#### **D.5.12 Broken or Failed Bag Detection**

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In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

**Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### **D.5.13 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.5.1 and D.5.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAPs usage limits and the VOC and HAPs emission limits established in Conditions D.5.1 and D.5.2.
  - (1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The cleanup solvent usage for each month;
  - (4) The total VOC and HAPs usage for each month; and
  - (5) The weight of VOCs and HAPs emitted for each compliance period.
- (b) To document compliance with Condition D.5.9, the Permittee shall maintain records of daily visible emission notations of the SILO2 and SILO3 stack exhausts.

- (c) To document compliance with Condition D.5.10, the Permittee shall maintain the following:
  - (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
    - (A) Inlet and outlet differential static pressure; and
    - (B) Cleaning cycle: frequency and differential pressure
  - (2) Documentation of all response steps implemented, per event
  - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
  - (4) Quality Assurance/Quality Control (QA/QC) procedures.
  - (5) Operator standard operating procedures (SOP).
  - (6) Manufacturer's specifications or its equivalent.
  - (7) Equipment "troubleshooting" contingency plan.
  - (8) Documentation of the dates vents are redirected.
- (d) To document compliance with Condition D.5.11, the Permittee shall maintain records of the results of the inspections required under Condition D.5.11 and the dates the vents are redirected.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### **D.5.14 Reporting Requirements**

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- (a) A quarterly summary of the information to document compliance with Condition D.5.1 and D.5.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

- (b) Submit an initial notification report immediately to the address listed in Section C - General Reporting Requirements, of this permit, and to the following address:

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

The report shall include the following information:

- (1) The name and address of the owner or operator;
- (2) The address of the solvent cleaning machine;

- (3) A brief description of each solvent cleaning machine including machine type, solvent/air interface area and existing controls;**
  - (4) The date of installation for the solvent cleaning machine;**
  - (5) The anticipated compliance approach for the solvent cleaning machine;**
  - (6) An estimated annual halogenated HAP solvent consumption for the solvent cleaning machine.**
- (c) Submit an initial statement of compliance for the solvent cleaning machine. This statement shall include:**
  - (1) The name and address of the owner or operator;**
  - (2) The address of the solvent cleaning machine;**
  - (3) A statement, signed by the owner or operator of the solvent cleaning machine, stating that the solvent cleaning machine for which the report is being submitted is in compliance with Condition D.5.7.**
  - (4) The compliance approach for each solvent cleaning machine.**

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

**Source Name:** ThermaTru Corporation  
**Source Address:** 108 Mutzfeld Road, Butler, Indiana 46721  
**Mailing Address:** 108 Mutzfeld Road, Butler, Indiana 46721  
**Source Mod. No.:** SSM 033-10998-00019  
**Facility:** Sheet Molding Compound Line  
**Parameter:** VOC  
**Limit:** Less than twenty five (25) tons per twelve (12) consecutive month period

**YEAR:** \_\_\_\_\_

Month	VOC Emissions This Month (tons)	VOC Emissions Previous 11 Months (tons)	VOC Emissions 12 Month Total (tons)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

**Submitted by:** \_\_\_\_\_  
**Title / Position:** \_\_\_\_\_  
**Signature:** \_\_\_\_\_  
**Date:** \_\_\_\_\_  
**Phone:** \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

**Source Name:** ThermaTru Corporation  
**Source Address:** 108 Mutzfeld Road, Butler, Indiana 46721  
**Mailing Address:** 108 Mutzfeld Road, Butler, Indiana 46721  
**Source Mod. No.:** SSM 033-10998-00019  
**Facility:** Sheet Molding Compound Line  
**Parameter:** VOC  
**Limit:** Single HAP and Combination of HAPs Less than ten (10) and twenty five tons per twelve (12) consecutive month period, respectively

**YEAR:** \_\_\_\_\_

Month	This Month (tons)		Previous 11 Months (tons)		12 Month Total (tons)	
	Single HAP	Combination of HAPs	Single HAP	Combination of HAPs	Single HAP	Combination of HAPs

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

**Submitted by:** \_\_\_\_\_

**Title / Position:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

## **Conclusion**

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. SSM 033-10998-00019.

Appendix A: Emissions Calculations  
VOC , Particulate Matter & HAPs  
From Surface Coating Operations

Page 1 of 6 TSD App A

Company Name: ThermaTru Corporation  
Address City IN Zip: 108 Mutzfeld Rd, Butler, IN 46721  
Source Modification: SSM 033-10998  
Plt ID: 033-00019  
Reviewer: Mark L. Kramer  
Date: May 24, 1999

Material	Density (lbs/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency
D2-APP1 (Adhesive application) PPG Heat Activated Trim Bond R-T-S																
(T7850) on Fiberglass Door Skins	8.66	50.88%	44.65%	6.23%	47.47%	45.37%	0.0108	450	1.03	0.540	2.62	63	11.5	45.3	1.19	50%
VOC									PM		Control Efficiency	0.00%				
State Potential Emissions									Add worst case coating to all solvents		Uncontrolled		2.62	62.9	11.5	45.3
METHODOLOGY											Controlled		2.62	62.9	11.5	45.3

Pounds of VOC per Gallon Coating less Water = (Density (lbs/gal) \* Weight % Organics) / (1-Volume % water)  
Pounds of VOC per Gallon Coating = (Density (lbs/gal) \* Weight % Organics)  
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)  
Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)  
Total = Worst Coating + Sum of all solvents used

Material	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Glycol Ethers			Glycol Ethers Emissions (tons/yr)
PPG Heat Activated Trim Bond R-T-S	8.66	0.0108	450.0000	5.00%			9.22
				TOTALS:	(tons/yr):		9.22
					(lb/hr):		2.10
					(g/sec):		0.265

Total State Potential Emissions

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

HAPs from Foam Injection Operations:

Annual MDI Emissions Projection Based Actual Usage from Existing Line

Projected ISO usage in 1999 - existing line	3659250	lbs			
Millions of pounds projected ISO in 1999 - existing line	3.659250				
Production adjustment factor new/old line	1.33				
Millions of pounds projected ISO in 1999 for new line	4.8668				
MDI Emission Factor from MDI Emissions Reporting Guideline SPI	0.67	lbs/million lbs of ISO			
Actual (3750 hrs) MDI Emissions	3.26076	lbs/3750 hours			
Potential MDI Emissions (8760 hours)	7.61713	lbs/yr	=	0.00381	tons/yr

Company Name: ThermaTru Corporation  
Address City IN Zip: 108 Mutfeld Rd, Butler, IN 46721  
Source Modification No.: SSM 033-10998  
Pit ID: 033-00019  
Reviewer: Mark L. Kramer  
Date: May 24, 1999

Confidential	Actual Hours of Operation in 1998		2753	Projected Hours of Operation New Facility				2700								
Materials	% Styrene	% Vinyl Toluene	Formulation Ratio	% of As-Applied	% Styrene of Total Material	% Vinyl Toluene of Total Material	% Styrene of Total Resins	Total lbs Resin Used 1998	lbs/hr of Styrene Resin Used	lbs/hr of Styrene Processed 1998	Multiplier to Projected Usage	New Facility Projected lbs of Styrene Processed/hr	% Flashoff	New Facility Projected lbs of Styrene Emitted/hr	Potential Emissions Styrene lbs/yr	Potential Emissions Styrene tons/yr
SMC-3																
Confidential																
Confidential																
Confidential																
Confidential																
Subtotal													3.0%			162.40
SMC-5																
Confidential																
Confidential																
Confidential																
Confidential																
Subtotal													3.0%			29.51
SMC-7																
Confidential																
Confidential																
Confidential																
Subtotal													3.0%			7.88
SMC-8																
Confidential																
Confidential																
Confidential																
Confidential																
Subtotal													3.0%			5.27
SMC-0																
Confidential																
Confidential																
Subtotal													3.0%			0.10
															Grand Total	205.2



**Appendix A: Emission Calculations  
HAP Emission Calculations**

Page 3 of 6 TSD AppA

**Company Name: ThermaTru Corporation  
Address City IN Zip: 108 Mutzfeld Rd, Butler, IN 46721  
Source Modification: SSM 033-10998  
Pit ID: 033-00019  
Reviewer: Mark L. Kramer  
Date: May 24, 1999**

Material	Density (lbs/gal)	Gallons of Material (gal/20 hrs)	Maximum (gal/hour)	Weight % Methylene Chloride	Weight % Propylene Oxide	Methylene Chloride Emissions (tons/yr)	Propylene Oxide Emissions (tons/yr)
MSDS							
Cold cleaner SMC-CC2 Methylene Chloride	10.94	1.75	0.0875	99.50%	0.50%	4.17	0.0210

Total State Potential Emissions

**METHODOLOGY**

HAPS emission rate (tons/yr) = Density (lbs/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

**Appendix A: Emission Calculations  
Baghouse Operations**

**Company Name: ThermaTru Corporation**  
**Address City IN Zip: 108 Mutzfeld Rd, Butler, IN 46721**  
**Source Modification: SSM 033-10998**  
**Plt ID: 033-00019**  
**Reviewer: Mark L. Kramer**  
**Date: May 24, 1999**

Unit ID	Control Efficiency (%)	PM Collected (lbs/day)	Gas or Air Flow Rate (acfm.)	Emission Rate before Controls (lbs/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lbs/hr)	Emission Rate after Controls (tons/yr)
<b>D2-DC1 for D2-MS1 (Machining Station)</b>	99.0%	2376.000	45000	100	438	1.00	4.38

**Methodology**

Emission Rate in lbs/hr (after controls) = (lbs/day collect/24 hrs/day)/(control efficiency) x (1-control efficiency)      lbs/hr collected = 99 lbs/hr  
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)  
Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)  
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	Emission Rate before Controls (lb/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
D2-DC1 for D2-MS1	99.0%	0.010	45000.0	385.7	1689.43	3.857	16.89
SILO2	99.0%	0.010	2000.0	17.1	75.09	0.171	0.751
SILO3	99.0%	0.010	2000.0	17.1	75.09	0.171	0.751

**Methodology**

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (cub. ft./min.) (60 min/hr) (lb/7000 grains)  
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

**Allowable Rate of Emissions**

	Process Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable Emissions (lbs/hr)
D2-DC1 for D2-MS1 (Machining Station)(FormX)	20250	10.13	19.34
SILO2 (Calcium Carbonate Storage Silo-2)	2960	1.48	5.33
SILO3 (Calcium Carbonate Storage Silo-3)	2960	1.48	5.33

**Methodology**

Allowable Emissions = 4.10(Process Weight Rate)^0.67

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**  
**Small Industrial Boiler**

**Company Name:** ThermaTru Corporation  
**Address City IN Zip:** 108 Mutzfeld Rd, Butler, IN 46721  
**Source Modification:** SSM 033-10998  
**Plt ID:** 033-00019  
**Reviewer:** Mark L. Kramer  
**Date:** May 24, 1999

**Insignificant Activities**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	D-MAU-1 through D-MAU-7 and M-MAU-1 through M-MAU-6
		D-MAU-1 -3 & M-MAU-1 & 2 = 8.80 mmbtu/hr each D-MAU-4 -7 & M-MAU-3 - 6 = 0.550 mmbtu/hr each
48.4	424.0	

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.403	1.61	0.127	21.2	1.17	17.8

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**

Page 6 of 6 TSD App A

**Natural Gas Combustion Only****MM BTU/HR <100****Small Industrial Boiler****HAPs Emissions****Company Name: ThermaTru Corporation****Address City IN Zip: 108 Mutzfeld Rd, Butler, IN 46721****Source Modification: SSM 033-10998****Pit ID: 033-00019****Reviewer: Mark L. Kramer****Date: May 24, 1999****HAPs - Organics**

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	4.452E-04	2.544E-04	1.590E-02	3.816E-01	7.208E-04

**HAPs - Metals**

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	1.060E-04	2.332E-04	2.968E-04	8.056E-05	4.452E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.